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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER NUMBER
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DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/523,619

Applicant(s)
Yoshimura et al.

Examiner
Callie Shosho

Group Art Unit
1714



☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11, 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-21 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-21 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 6

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 recites the limitation "the water-soluble thickening resin" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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4. Claims 2, 4, 6, 8, 10, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanbayashi et al. (U.S. 6,083,311).

Kanbayashi et al. disclose a water-based metallic ink comprising 1-20 wt% metallic pigment, 0.1-10 wt% water-soluble resin, water, water-soluble solvent, and 1-15 wt% colorant. The metallic pigment has average particle size of, for instance, 17 μm (col.2, lines 42-51, col.3, lines 1-37, col.4, lines 25-32, col.5, lines 23-36 and 45-47, and col.9, line 53).

Although there is no explicit disclosure that the ink is glittering, given that the ink of Kanbayashi et al. contains identical type and amounts of metallic pigment as presently claimed, it is clear that the ink of Kanbayashi et al. would inherently glitter.

In light of the above, it is clear that Kanbayashi et al. anticipates the present claims.

5. Claims 2, 4, 6, 8, 10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyashita et al. (U.S. 5,474,603).

Miyashita et al. disclose an aqueous metallic ink comprising 3-15 wt% aluminum powder pigment having average particle diameter of 5-30 μm , 0.7-2 wt% water-soluble resin, water-soluble solvent, water, and 5-20 wt% colorant (col.3, lines 1-4 and 22-35 and 45-48 and col.4, lines 15, 28, and 42-65).

Although there is no explicit disclosure that the ink is glittering, given that the ink of Miyashita et al. contains identical type and amounts of metallic pigment as presently claimed, it is clear that the ink of Miyashita et al. would inherently glitter.

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In light of the above, it is clear that Miyashita et al. anticipates the present claims.

6. Claims 2, 4, 6, 10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 09249844.

Pending translation of the Japanese reference, it is noted that the reference discloses a water-based metallic ink which comprises 1-10 wt% aluminum powder pigment, 0.5-10 wt% water-soluble resin, water-soluble solvent, water, and 0.5-25 wt% colorant.

Although there is no explicit disclosure that the ink is glittering, given that the ink of JP 09249844 contains identical type and amounts of metallic pigment as presently claimed, it is clear that the ink of JP 09249844 would inherently glitter.

In light of the above, it is clear that JP 09249844 anticipates the present claims.

7. Claims 2, 4, 6, 10, 12, 14, and 21 are rejected under 35 U.S.C. 102(a) as being anticipated by JP 10077438.

Pending translation of the Japanese reference, it is noted that the reference discloses a water-based metallic gloss ink comprising 1-10 wt% pearl pigment, 0.1-10 wt% colorant, 0.1-3 wt% water-soluble resin, 0.1-5 wt% aluminum powder pigment, water-soluble solvent, and water.

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Although there is no explicit disclosure that the ink is glittering, given that the ink of JP 10077438 contains identical type and amounts of metallic pigment as presently claimed, it is clear that the ink of JP 10077438 would inherently glitter.

In light of the above, it is clear that JP 10077438 anticipates the present claims.

8. Claims 2, 6, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 8151547.

Pending translation of the Japanese reference, it is noted that the reference discloses a water-based metallic glittering ink comprising 0.2-20 wt% water-soluble resin, 1-30 wt% aluminum powder pigment, water-soluble solvent, and water.

In light of the above, it is clear that JP 8151547 anticipates the present claims.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10077438 in view of Miyashita et al. (U.S. 5,474,603).

The disclosure with respect to JP 10077438 in paragraph 7 above is incorporated here by reference.

The difference between JP 10077438 and the present claimed invention is the requirement in the claim of average diameter of the metallic pigment.

Miyashita et al., which is drawn to ink compositions, disclose the use of metallic pigment such as aluminum powder having average particle diameter of 5-30 μm wherein if the particle

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diameter is less than 5 μm , the metallic gloss of the writing is reduced and the writing becomes unclear, while if the particle diameter is greater than 30 μm , ink delivery from the writing instrument is insufficient (col.3, lines 30-35).

In light of the motivation for using metallic pigment with specific average diameter disclosed by Miyashita et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use metallic pigment with this average diameter in the ink of JP 10077438 in order to produce an ink with good gloss that produces clear, consistent writing, and thereby arrive at the claimed invention.

12. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanbayashi et al. (U.S. 6,083,311), Miyashita et al. (U.S. 5,474,603), or JP 09249844 any of which in view of Okuda et al. (U.S. 5,510,397).

The disclosures with respect to Kanbayashi et al., Miyashita et al., and JP 09249844 in paragraphs 4, 5, and 6 respectively are incorporated here by reference.

The difference between Kanbayashi et al., Miyashita et al., or JP 09249844 and the present claimed invention is the requirement in the claims of opacifying pigment.

Okuda et al., which is drawn to ink composition, disclose the use of opacifying pigment in order to produce an ink with good optical density (col.2, lines 43-60 and col.3, lines 51-63).

In light of the motivation for using opacifying pigment disclosed by Okuda et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use

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such pigment in the ink of either Kanbayashi et al., Miyashita et al., or JP 09249844 in order to produce an ink with good optical density, and thereby arrive at the claimed invention.

13. Claims 1, 5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 7118592 in view of either Babler (U.S. 5,554,217) or Sullivan (U.S. 5,753,371).

Pending translation of the Japanese reference, it is noted that the reference discloses a glitter ink comprising 5-20 wt% pearlescent pigment, water-soluble resin, water-soluble solvent, and water.

The difference between JP 7118592 and the present claimed invention is the requirement in the claims of glass flake.

Babler, which is drawn to pigment compositions suitable for use in inks, discloses the use of pearlescent pigment such as glass flakes having average particle size of 1-50 μm in order to produce an ink with excellent rheological and gloss properties which demonstrates an excellent flop effect (col.2, lines 13-16 and col.4, lines 15-20 and 32-35).

Alternatively, Sullivan et al., which is drawn to pearlescent pigments suitable for use in inks, disclose the use of glass flakes having average particle diameter of 1-150 μm wherein the motivation for using such glass flakes is that they are very resilient and optically attractive (col.2, lines 28-39).

In light of the motivation of using glass flakes disclosed by either Babler or Sullivan et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use

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glass flakes as the pearlescent pigment in JP 7118592 in order to produce an ink with excellent rheological and gloss properties which demonstrates an excellent flop effect, or alternatively, an ink which is resilient and optically attractive, and thereby arrive at the claimed invention.

14. Claims 1, 3, 5, 7, 9, 11, 15-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al. (U.S. 6,039,796) in view of Babler (U.S. 6,063,182).

Kubota et al. disclose an aqueous based ink comprising inorganic pigment, 0.5-25 wt% colorant, water-soluble solvent, water, 0.5-30 wt% water-soluble resin, and 0.1-40 wt% anionic or nonionic resin emulsion (col.3, lines 61 and 65, col.4, lines 15-17, col.5, line 32, col.6, lines 15 and 40-43).

The difference between Kubota et al. and the present claimed invention is the requirement in the claims of glass flakes.

Babler, which is drawn to ink compositions, disclose the use of 1-30 wt% inorganic pigment such as glass flake having average particle size of 0.5-10 mm (col.5, lines 13-35) wherein the motivation for using such pigment is that it is they are less dusty and easily handled and dispersed (col.3, lines 9-11, 15-17, and 22-24).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use glass flakes as the inorganic pigment in the ink of Kubota et al. in order to produce an ink which is easily handled and dispersed, and thereby arrive at the claimed invention.

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15. Claims 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al. in view of Babler as applied to claims 1, 3, 5, 7, 9, 11, 15-18, and 20 above, and further in view of Whyzmuzis (U.S. 5,714,526).

The difference between Kubota et al. in view of Babler and the present claimed invention is the requirement in the claims of opacifying pigment.

Whyzmuzis, which is drawn to ink composition, discloses the use of opacifying pigment (col.7, lines 4-10) in order to produce an ink with good optical density.

In light of above, it therefore would have been obvious to one of ordinary skill in the art to use such pigment in the ink of Kubota et al. in order to produce an ink with good optical density, and thereby arrive at the claimed invention.

16. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al. in view of Babler as applied to claims 1, 3, 5, 7, 9, 11, 15-18, and 20 above, and further in view of Morita et al. (U.S. 6,099,629).

The difference between Kubota et al. in view of Babler and the present claimed invention is the requirement in the claims of the minimum film forming temperature of the resin emulsion.

Morita et al., which is drawn to ink composition, disclose the use of resin emulsion with minimum film forming temperature of less than 5⁰ C. The motivation for using such resin emulsion is to control the stickiness and drying of the ink (col.6, lines 38-50 and col.13, lines 47-51).

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In light of the motivation for using resin emulsion with specific minimum film forming temperature as described above, it therefore would have been obvious to one of ordinary skill in the art to use such resin emulsion in the ink of Kubota et al. in order to control the stickiness and drying of the ink, and thereby arrive at the claimed invention.

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Heinz et al. (U.S. 5,672,200) disclose an ink comprising glass flakes.

Nishio et al. (U.S. 6,056,463) disclose an aqueous ink containing metallic pigments.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie Shosho whose telephone number is (703) 305-0208. The examiner can normally be reached on Mondays-Thursdays from 7:00 am to 4:30 pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3599.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Callie Shosho

9/15/00